

REMARKS

The Office Action is described in detail below.

Claim Rejections - 35 USC 103

Paragraph 2 of Office Action

Claims 1, 7-9 and 16-57 are rejected under 35 USC 103(a) as being unpatentable over Morishita (US 5,529,956) in view of Harshfield (US 6,031,287).

Claim 1 of the present invention recites:

1. A method of making an electrically programmable memory element, comprising:

providing a first dielectric layer, said first dielectric layer having an opening, said opening having a sidewall surface and a bottom surface;

forming a conductive layer on said sidewall surface and said bottom surface;

removing at least a portion of said conductive layer from said bottom surface;

forming a second dielectric layer on said conductive layer and on said bottom surface within said opening; and

forming a programmable resistance material in electrical communication with said conductive layer.

Neither Morishita nor Harshfield teach or suggest applicants' limitation: *"forming a second dielectric layer on said conductive layer and on said bottom surface within said opening"*

Referring to Figure 1D or Figure 2 of Morishita it is seen that, using an electroplating process, gold is plating-grown in the through hole 8 until the grown gold reaches the same height as a level of a surface of the first conductive film 5. Hence, Morishita fails to teach or suggest forming a dielectric layer (or a dielectric material) on the bottom surface of through hole 8.

Likewise, Harshfield, Figure 24 shows a conductive layer 124 disposed on the bottom surface of the opening. Hence, Harshfield also fails to teach or suggest applicants' limitation *"forming a second dielectric layer on said conductive layer and on said bottom surface within said opening"*

Hence, the combination of Morishita in view of Harshfield fail to teach or suggest all of the limitations of applicants' independent claim 1. Likewise, the combination of Morishita in view of Harshfield fails to

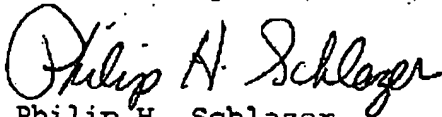
teach or suggest the limitations of applicants' independent claims 20, 30, 41 and 47..

The rejection of claims 1, 7-8, and 16-57 under 35 USC 103(a) as being unpatentable over Morishita in view of Harshfield is overcome and applicants request it be removed.

SUMMARY

In view of the above remarks, claims 1, 7-9, 16-23, 25, 26, 29-33, 35, 36, and 39-53 are in condition of allowance. Applicants respectfully request reconsideration, withdrawal of the outstanding rejections and notification of allowance. Should the Examiner have any questions or suggestions regarding the prosecution of this application, he is asked to contact applicants' representative at the telephone number listed below.

Respectfully submitted,



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